BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2022-2-E

April __, 2022

IN RE:	Annual Review of Base Rates for Fuel Costs of Dominion Energy South Carolina, Incorporated (For Potential Increase or Decrease in Fuel Adjustment)	**JOINT PROPOSED ORDER APPROVING AND ADOPTING ADJUSTMENT IN FUEL COSTS RECOVERY FACTORS**

This matter comes before the Public Service Commission of South Carolina ("Commission") on the annual review of the fuel purchasing practices and policies of Dominion Energy South Carolina, Inc. ("DESC" or "Company") and for a determination as to whether any adjustment in the fuel cost recovery factors is necessary and reasonable. The procedure followed by the Commission in this proceeding is set forth in S.C. Code Ann. § 58-27-865. Additionally, and pursuant to S.C. Code Ann. § 58-39--140, the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover the incremental and avoided costs incurred by the Company to implement the Distributed Energy Resource ("DER") program previously approved by the Commission. The period under review in this Docket is January 1, 2021, through December 31, 2021 ("Review Period").

I. PROCEDURAL HISTORY

A. Notice

By letter dated October 13, 2021, the Clerk's Office of the Commission instructed the Company to publish a Notice of Filing and Public Hearing ("Notice") in newspapers of general circulation in the areas affected by the Commission's annual review of the Company's fuel purchasing practices and policies by November 19, 2021. The letter also instructed the Company to furnish the Notice to its customers by U.S. Mail via bill inserts or electronically to customers who have agreed to receive notice electronically on or before November 19, 2021. The Notice indicated the nature of the proceeding and advised all interested parties desiring participation in the scheduled proceeding of the manner and time in which to file appropriate pleadings. On December 1, 2021, the Company filed with the Commission affidavits of publication of the Notice as well as an affidavit that the Notice had been timely furnished to each affected customer in accordance with the instructions set forth in the October 13, 2021 letter from the Clerk's Office.

B. Intervenors

The Commission received a timely petition to intervene from the Southern Alliance for Clean Energy ("SACE") and the South Carolina Coastal Conservation League ("CCL") (collectively "SACE/CCL"), which was granted by Order No. 2021-154-H. CMC Steel South Carolina ("CMC") and the South Carolina Energy Users Committee ("SCEUC") submitted petitions to intervene out of time, which were granted by Order Nos. 2022-37 and 2022-82, respectively. The petitions to intervene of SACE/CCL, CMC, and SCEUC were not opposed, and no other parties sought to intervene in this proceeding. The South Carolina Office of Regulatory Staff ("ORS") is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B).

C. Hearing

The Commission held the evidentiary merits hearing on this matter on April 7 and 8, 2022, with the Honorable Justin T. Williams presiding. DESC was represented at the hearing by Michael J. Anzelmo, Esquire; Jason A. Richardson, Esquire; K. Chad Burgess, Esquire; and Matthew W. Gissendanner, Esquire. SACE/CCL appeared virtually and were represented by Kate Lee Mixson, Esquire and Emma C. Clancy, Esquire. SCEUC was represented by Scott Elliott, Esquire. ORS was represented by Alexander W. Knowles, Esquire, and Nicole M. Hair, Esquire. By Directive Order No. 2022-29H, CMC was excused from participating in the merits hearing. The Company, SACE/CCL, and ORS pre-filed and presented witness testimony. No other party filed testimony.

Through their personal appearances, DESC presented the direct testimonies of George A. Lippard, III; Michael D. Shinn; James W. Neely; and Mark C. Furtick; the direct testimonies and exhibits of Rose M. Jackson;[1] and Tom A. Brookmire;[2] the corrected direct testimony of Henry E. Delk, Jr.; and the corrected direct testimony and exhibits of Allen W. Rooks.[3] Through his personal appearance, DESC presented the rebuttal testimony of Witness Neely in response to the direct testimony of SACE/CCL Witness R. Thomas Beach. The pre-filed testimonies and exhibits of DESC's witnesses were accepted into the record without objection. The following corrections and updates to prefiled testimony were made to DESC's witnesses' testimony during the merits hearing:

1. Witness Jackson provided a grammatical correction to her testimony on page 10, line 6, as well as an update based on current fuel prices on page 10, line 8 (Tr. p. 59:5 – 59:11).
2. Witness Furtick updated the balance of avoided cost reported to $8,193,729 (Tr. p. 133:13 - 133:15);
3. Witness Neely provided a correction to page 9, line 10, of his prefiled rebuttal testimony to correct the citation from Order No. 2021-569 to Order No. 2021-296(A) (Tr. p. 153.9, l. 10); and

[1] Witness Jackson's prefiled exhibit (RMJ-1) was entered into the record as Hearing Exhibit 1.
[2] Witness Brookmire's Exhibit TAB-1 was entered into the record as Hearing Exhibit 2.
[3] Witness Rooks filed Corrected Direct Testimony and Corrected Exhibits AWR-8 and -9 on March 4, 2022. Witness Rooks' exhibits AWR-1 through AWR-7 and AWR-10 through AWR-15, along with corrected exhibits AWR-8 and -9, were entered into the record as Hearing Exhibit 3.

4. Witness Rooks corrected several figures on page 16 of his testimony, including the updated figures of $133.32 and $7.40 on line 13, and $0.87 on line 20. The changes were associated with the Company's amended Demand Side Management filing in Docket No. 2022-52-E (Tr. p. 248:15 – 248:21).

Through his virtual personal appearance, SACE/CCL presented the direct testimony and exhibits of R. Thomas Beach. The pre-filed testimony of Witness Beach was offered and accepted into the record without objection. Witness Beach's exhibits labeled RTB-1 through RTB-2 were offered into the record as Hearing Exhibit 5.

Through their personal appearances, ORS presented the direct testimonies and exhibits of Anthony D. Briseno; Gretchen Pool; Brandon S. Bickley; and Michael L. Seaman-Huynh. ORS presented Anthony D. Briseno and Gretchen Pool as its first panel. Witness Briseno presented direct testimony and eight (8) exhibits, which demonstrated the results of ORS's examination of the Company's books and records pertaining to operations under the Fuel Adjustment Clause for the Review Period.[4] Tr. p. 306:24 – 307:15). ORS Witness Gretchen Pool presented direct testimony and one (1) exhibit.[5] Witness Pool testified regarding ORS's recommendations resulting from the examination of the Company's DER expenses for the Review Period, for January 2022 through April 2022 ("Estimated Period"), and May 2022 through April 2023 ("Forecasted Period") (Tr. p. 310:25 – 311:10).

ORS presented Brandon Bickley and Michael Seaman-Huynh as its second panel of witnesses. Witness Bickley presented direct testimony and six (6) exhibits.[6] Witness Bickley testified regarding ORS's recommendations resulting from ORS's examination and review of the

[4] Witness Briseno's exhibits ADB-1 through ADB-8 were entered into the record as Hearing Exhibit 6.
[5] Witness Pool's Exhibit GCP-1 was entered into the record as Hearing Exhibit 7.
[6] Witness Bickley's Exhibits BSB-1 through BSB-6 were entered into the record as Hearing Exhibit 8.

Company's power plant operations. ORS Witness Seaman-Huynh presented direct testimony and five (5) exhibits.[7] (Tr. p. 321:15 – 322:24). Witness Seaman-Huynh testified regarding ORS's recommendation resulting from the examination and review of the Company's fuel expenses used in the generation of electricity to meet the Company's retail customer requirement during the Review Period (Tr. p. 326:2 – 327:17). The pre-filed direct testimonies and exhibits of the ORS witnesses were accepted into the record without objection.

SCEUC and CMC did not submit prefiled testimony or present any witnesses at the hearing.

II. STATUTORY STANDARDS AND REQUIRED FINDINGS

Title 58, Chapter 27, Article 7, of the South Carolina Code of Laws (2015) sets forth the statutory law regarding electrical utilities' rates and charges and the Commission's authority to approve those rates and charges. "Every rate made, demanded or received by an electrical utility... shall be just and reasonable." S.C. Code Ann. § 58- 27-810 (Supp. 2020). With the passage of 2019 Act No. 62, the General Assembly set forth the rights of an electrical utility customer, as codified in Section 58-27-845, to protect, help, and equip customers of electric utilities, and to require the Commission to fix "just and reasonable utility rates." S.C. Code Ann. § 58-27-845 (Supp. 2020).

Section 58-27-865 establishes the authority and responsibility of the Commission to annually review an electrical utility's fuel purchasing practices and policies and to determine if any adjustment to the fuel cost recovery mechanism used by the electrical utility is necessary and reasonable.

> The commission shall direct each electrical utility which incurs fuel cost for the sale of electricity to submit to the commission and to the

[7] Witness Seaman-Huynh's Exhibits MSH-1 through MSH-5 were entered into the record as Hearing Exhibit 9.

> Office of Regulatory Staff... its estimates of fuel costs for the next twelve months.... Upon conducting public hearings in accordance with law, the commission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.

S.C. Code Ann. § 58-27-865(B) (Supp. 2020).

As part of its review of an electric utility's proposed rate changes, the Commission also has the authority to "direct the electrical utilities to account monthly for the differences between the recovery of fuel costs through base rates and the actual fuel costs experience;" to "offset... the cost of fuel recovered through sales of power pursuant to interconnection agreements;" and to "disallow recovery of any fuel costs that it finds without just cause to be the result of failure of the utility to make every reasonable effort to minimize fuel costs or any decision of the utility resulting in unreasonable fuel costs." S.C. Code Ann. § 58- 27-865(C-F) (2015).

Chapter 39 of Title 58 of the South Carolina Code of Laws (2015) mandates that the goal of the South Carolina Distributed Energy Resource Act is to "promote the establishment of a reliable, efficient, and diversified portfolio of distributed energy resources for the State." Section 58-39-130 sets forth the requirements an electrical utility must meet in establishing a DER program. If approved, "an electrical utility shall be permitted to recover its costs related to the approved distributed energy resource program pursuant to Sections 58-27-865 and 58-39-140 to the extent those costs are reasonably and prudently incurred to implement an approved program." S. C. Code Ann. § 58-39-130(A)(2) (2015). Further, Section 58-39-140 allows a utility to submit estimates of its incremental costs for the upcoming year: "'incremental costs' means all reasonable and prudent costs incurred by an electrical utility to implement a distributed energy resource program." S.C. Code Ann. § 58-39-140(A) (2015).

Consistent with the requirements of S.C. Code Ann. § 58-27-865(B), the Commission convened an evidentiary hearing to determine the reasonableness of the Company's proposed rates to recover fuel costs incurred during the Review Period.

III. REVIEW OF THE EVIDENCE PRESENTED AT THE HEARING AND EVIDENTIARY CONCLUSIONS

After considering and evaluating the evidence and testimonies of the witnesses, the Commission reaches the following factual and legal conclusions:

A. Fuel Purchasing, Environmental Costs, Plant Operations and Fuel Inventory Management

DESC's first panel of witnesses, George A. Lippard, III, and Henry E. Delk, Jr., discussed the Company's plant operations. DESC Witness Lippard provided testimony on the Company's operating performance at the Virgil C. Summer Nuclear Station ("VCS" or "V.C. Summer"). Witness Lippard testified that V.C. Summer's net capacity factor based on reasonable excludable nuclear system reductions for the Review Period was 102.16%, and the gross generation output totaled 7,281,012 megawatt hours. (Lippard Direct 3:5–9) (Tr. p. 11:12 – 11:13). During the Review Period, the Institute of Nuclear Power Operations rated VCS's overall performance as exemplary, and the Nuclear Regulatory Commission ("NRC") reported that VCS operated in a manner that preserved public health and safety and fully met all cornerstone objectives. (Lippard Direct 3:19–4:2) (Tr. p. 11:5 – 11:7). Witness Lippard testified that during the Review Period, VCS experienced one mid-cycle unplanned maintenance outage in May 2021 to repair a valve actuator air leak. During the Review Period, VCS experienced one planned refueling outage, which last approximately 36 ½ days and during which time the Company met all technical objectives and completed scheduled maintenance activities with no nuclear safety significant events. (Lippard

Direct 4:6–5:13) (Tr. P. 13:5 – 13:7). Witness Lippard testified that VCS's main generator step-up transformer ("GSU") experienced a significant failure on November 15, 2021, thus interrupting VCS's planned return to service following refueling. (Lippard Direct 7:3–8) (Tr. p. 13:8 – 13:14). At the hearing, Witness Lippard testified that, regarding the testing and monitoring performed by DESC relating to the GSU, that there were no indications the GSU would or could fail (Tr. p. 41:6 – 41:20), and stated that the investigation into the failure of the GSU is ongoing. DESC returned VCS to service on December 10, 2021, by installing a spare GSU that DESC had maintained in inventory. (Lippard Direct 8:5–20) (Tr. p. 14:6 – 14:14).

Company Witness Henry E. Delk, Jr. testified regarding the Company's operating performance of DESC's non-nuclear power generation units and South Carolina Generating Company's ("GENCO") A.M. Williams Electric Generating Station ("Williams Station") during the Review Period. Witness Delk testified regarding the performance of DESC's fossil generation units and discussed the significant maintenance projects DESC undertook during the Review Period. (Delk Direct 5:3 – 9:20) (Tr. p. 19:18 – 19:22). Witness Delk discussed significant forced outages for the Review Period, including an update on the Wateree Unit 2 forced outage that began on February 19, 2020 (Tr. p. 20:2 – 20:4), an outage at Columbia Energy Center due to the failure of the second circulating water pump on October 12, 2021 (Tr. p. 20:8 – 21:7), and an outage at Urquhart Unit 6 caused by the mis-installation of liner caps by the Company's contractor beginning on December 18, 2021 (Delk Direct 10:7 – 13:5) (Tr. p. 21:8 – 21:19).

At the hearing, Witness Delk testified regarding DESC's monitoring and oversight of the outages at Columbia Energy Center and Urquhart Unit 6, as well as DESC's efforts to restore the units to service. Following the forced outage at Columbia Energy Center, the Company took the following actions: replacing and realigning all water treatment chemical valves; adding additional on-line water chemistry analyzers to immediately detect future chemistry excursions; and ordering a spare circulating water pump to be stored on site. (Tr. p. 19:22 – 21:7). With respect to the Urquhart Unit 6 outage, Witness Delk testified that not only had the vendor accepted responsibility and covered the necessary repairs, but also that the Company proactively took a scheduled maintenance outage to make the necessary repairs to the unit. (Tr. p. 38:18 – 38:22; 39:7 – 39:10). Because of mild weather at the time of the outage, Urquhart 6 was not needed to serve base load, and would have been an intermediate facility; therefore, although the outage was extended by two weeks, there were no increased fuel costs to customers as a result of the outage (Tr. p. 38:23 – 39:6; 39:11 – 39:18).

Witnesses Lippard and Delk testified on cross-examination that the Company would not object to ORS addressing any (over)/under-recovered balance caused by the outages at Wateree 2 and the failure of the GSU at V.C. Summer in next year's fuel proceeding (Tr. p. 25:12 – 25:16; 26:2 – 26:15). Witnesses Lippard and Delk testified that this adheres to historical practice in DESC fuel proceedings (Tr. p. 25:6 – 25:11; 26:6 – 26:10).

Witness Jackson testified regarding the natural gas purchasing practices for DESC generation, the natural gas prices for the Review Period, and on the near-term outlook for natural gas prices. Witness Jackson discussed the process by which DESC provides current market information to its Economic Resource Commitment Group for the Company's electric generation plants to determine the most economical means of reliably meeting the electricity needs of customers. (Jackson Direct 3:20–4:10) (Tr. p. 108:11 – 108:16). Witness Jackson testified that her department is directed to purchase natural gas supplies at the best available current market prices. (Jackson Direct 4:6–10). Witness Jackson also described the Company's gas contracts and purchasing practices and the tools DESC uses to accurately determine market-based prices for natural gas supplies DESC purchases. (Jackson Direct 5:14–6:10) (Tr. p. 64.5, ll. 14-19). Witness Jackson discussed DESC's natural gas transportation capacity and contracting practices, and the Company's practices to maintain natural gas transportation capacity and to manage and minimize the costs of that capacity. (Jackson Direct 6–9). Based on DESC's practices and efforts described in her testimony, Witness Jackson testified that DESC made diligent and prudent efforts to obtain reasonable market-based prices for the reliable supply of natural gas for electric generation and to procure the necessary capacity for the delivery of that supply during the Review Period.

Witness Shinn testified on procurement and delivery activities for coal and No. 2 fuel oil used in electric generation for DESC and GENCO's Williams Station and the procurement and delivery of limestone for the Company's scrubbers located at the Wateree and Williams Station steam plants. Witness Shinn described changes in the coal markets since DESC's last annual fuel adjustment hearing and how those changes affected coal procurement for the Review Period. (Shinn Direct 2:16–3:2) (Tr. p. 68:13 – 68:19). Witness Shinn described DESC fuel purchasing practices, the use of a mixture of spot and long-term contracts, decision-making process for use of spot versus long-term contracts, inventory management, transportation services management, and contracting procedures to secure the necessary quantities of coal and No. 2 fuel oil at competitive prices. (Shinn Direct 3–13). Witness Shinn also described the Company's ongoing efforts to reduce fuel costs with purchasing coal, No. 2 fuel oil, and environmental reagents, including through evaluating availability of alternative supply sources and transportation arrangements. (Shinn Direct 13–21) (Tr. p. 69:2 – 69:5). Based on DESC's practices and efforts described in his testimony, Witness Shinn testified that DESC made reasonable and prudent efforts to obtain and transport high quality supplies of coal, No. 2 fuel oil, and environmental reagents at the lowest possible cost to customers. (Shinn Direct 22:4–9) (Tr. p. 69:23 – 70:5).

Witness Brookmire testified regarding the nuclear fuel purchasing process for DESC generation and the prices for conversion services, enrichment services, and fuel fabrication for the Review Period and on the near-term outlook. Witness Brookmire described how the Nuclear Fuel Procurement Group makes purchasing decisions for nuclear fuel founded on future planned fuel requirements, discussed DESC's contracting practices relating to procurement of uranium, conversion services, enrichment and fabrication, management of its contracts and inventory, and DESC's efforts to monitor the nuclear fuel market on an ongoing basis and evaluate spot market opportunities to supplement long-term contract supplies as appropriate. (Brookmire Direct 3−5) (Tr. p. 74:22 – 74:25). Witness Brookmire discussed current market conditions for the "front-end" components of nuclear fuel, including market history such as the Fukushima disaster and current developments and trends bearing on national and international supply and demand. (Brookmire Direct 5−7) (Tr. p. 76.5 l. 9 - 76.7 l. 23). Based on DESC's efforts and practices described in his testimony, Witness Brookmire testified that DESC made reasonable and prudent efforts to obtain market-based prices and reliable supply for its nuclear fuel requirements at VCS.

ORS Witness Bickley testified regarding ORS's recommendations resulting from ORS's examination and review of the Company's power plant operations used in the generation of electricity to meet the Company's South Carolina retail customer requirements during the Review Period, and to ensure the Company efficiently operated its plants and made every reasonable effort to minimize fuel costs to provide reliable and high-quality service to its customers. Witness Bickley discussed ORS's analysis of DESC's monthly fuel reports, power plant performance data, unit outages, heat rate data, and generation statistics. Witness Bickley also described ORS's other monitoring activities relating to power plant operations, including industry and governmental publications, attending via virtual participation the NRC's 2020 Annual Assessment meeting for

VCS, and interviews with Company personnel relating to DESC's electric generation, power plant outages, and maintenance activities, and site visits. (Bickley Direct 3:8−20) (Tr. p. 320:22 – 321:11). Witness Bickley discussed ORS's review of the Company's operating statistics by generating unit and ORS's activities in reviewing all outages for the Review Period. (Bickley Direct 4:1 – 6:9). Witness Bickley indicated that ORS's review of the Wateree 2 and VCS forced outages is ongoing and that ORS will review these outages during the Company's next fuel proceeding wherein the outage is complete and/or the final reports are available. (Bickley Direct 4:18 – 5.18) (Tr. p. 323.4 l. 9 - 323.5 l. 18). Witness Bickley also testified regarding ORS's review of the Company's generation mix and plant-by-plant fuel costs during the Review Period, as well as ORS's review of the Company's forecasted power plant operations. (Bickley Direct 6:3 - 7:4) (Tr. p. 323.6 l. 1 - 323.7 l. 2). Witness Bickley testified that based on ORS's review, ORS determined the Company made reasonable efforts to maximize unit availability and every reasonable effort to minimize fuel costs. (Bickley Direct 5:21−23) (Tr. p. 323.7, ll. 2 - 4).

ORS Witness Seaman-Huynh testified that ORS evaluated the Company's fuel procurement and forecasting policies, procedures, and activities to ensure the Company made every reasonable effort to minimize fuel costs to provide reliable and high-quality service to its customers. (Seaman-Huynh Direct 2:15−18) (Tr. p. 326:8 – 327:1). Witness Seaman-Huynh explained ORS's review of the Company's fuel expenses, including its examination of documents related to the Company's fuel, environmental, and purchased power expenses. He also testified regarding ORS's analysis of the Company's monthly fuel reports, examination of the Company's contracts for fuel, transportation, environmental reagents and purchased power, and evaluation of the Company's policies and procedures for fuel procurement. (Seaman-Huynh Direct 2:23−3:4) (Tr. p. 326:8 – 327:1). Witness Seaman-Huynh described the additional steps taken by ORS in its review including interviews with Company personnel relating to fuel procurement, transportation, environmental compliance costs and procedures, emissions, forecasting, and DESC policies and procedures pertaining to fuel procurement, in addition to monitoring related industry and governmental publications and conducting site visits. (Seaman-Huynh Direct 3:10−17) (Tr. p. 326:8 – 327:1).

No other parties presented testimony related to the prudency of DESC's fuel purchasing practices, power plant operations, or fuel inventory management.

Based upon the evidence and testimony of the witnesses, the Commission finds DESC's fuel purchasing practices and policies, environmental costs, power plant operations, and fuel inventory management during the Review Period are just and reasonable.

B. Net Energy Metering (NEM) Methodology

The Commission has determined and approved the following 11 components of value for NEM Distributed Energy Resources (the "NEM Value Stack"), as set forth in Order No. 2015-194 and modified by Order No. 2021-569:

Net Energy Metering Methodology

1. +/- Avoided Energy
2. +/- Avoided Capacity
3. +/- Ancillary Services
4. +/- T&D Capacity
5. +/- Avoided Criteria Pollutants
6. +/- Avoided CO_2 Emission Cost
7. +/- Fuel Hedge
8. +/- Utility Integration & Interconnection Costs
9. +/- Utility Administration Costs
10. +/- Environmental Costs
11. +/- Line Losses
12. **= Total Value of NEM Distributed Energy Resources**

Witness James Neely, DESC Energy Market Consultant, testified regarding the eleven (11) component methodology for Distributed Energy Resources ("DER") avoided cost. Witness Neely testified that the Company's calculations comply with the requirements established by the Commission in Order No. 2015-194. Witness Neely testified that the Company updated the components of value both for the current period and for the value over the twenty-year planning period, in accordance with Order No. 2021-569, as set forth in Table 2 of his direct testimony:

Table 2
Total Value of NEM Distributed Energy Resources ($/kWh)
Proposed Values

	Current Period ($/kWh)	**20-Year Levelized ($/kWh)**	**Components**
1	$0.03024	$0.03878	Avoided Energy Costs
2	$0.00000	$0.00034	Avoided Capacity Costs
3	$0.00000	$0.00000	Ancillary Services
4	$0.00000	$0.001838	T & D Capacity
5	$0.0000004	$0.0000002	Avoided Criteria Pollutants
6	$0.00000	$0.00000	Avoided CO_2 Emission Cost
7	$0.00000	$0.00000	Fuel Hedge
8	($0.00180)	($0.00180)	Utility Integration & Interconnection Costs
9	$0.00000	$0.00000	Utility Administration Costs
10	$0.00015	$0.00011	Environmental Costs
11	$0.02860	$0.03928	Subtotal
12	$0.00234	$0.003208	Line Losses @ 0.9245
13	$0.03093	$0.04248	**Total Value of NEM Distributed Energy Resources**

Witness Neely further explained DESC's evaluation of each component and its associated value (identified here by reference to the line numbers in Table 2 above) (Tr. p. 141:6 – 144:13) as follows:

LINE 1: The Company bases its calculation of avoided energy costs on its PURPA avoided cost values, except that it removes and separately states the cost of criteria pollutants and environmental cost components in components of value on lines 5 and 10 in accordance with the methodology set forth in Commission Order No. 2015-194.

LINE 2: The Company has determined this component of value is zero for the current period, as no capacity needs will be present until 2028. Consistent with Order No. 2021-569, the component of value for the 20-year planning horizon is set to $0.00034 per kWh.

LINE 3: The Company determined this component of value is zero but addressed certain non-zero costs under the integration costs in line 8.

LINE 4: The Company determined that its NEM distributed resources will not avoid any transmission or distribution (T&D") capacity for the current period and, as a result, that the value of this category is zero. The value calculated by the Company for the 20-year planning horizon is $0.001838 per kWh. Pursuant to Order No. 2021-569, DESC filed its plan for improving its data capabilities over time to improve the insight into the T&D systems and to modernize the planning of T&D assets to account for the ability of DERs to avoid or defer traditional, utility-owned T&D capital investments ("T&D Plan"). This T&D Plan was filed with the Commission in Docket No. 2021-182-E on November 17, 2021.

LINE 5: The Company determined that there is a positive avoided costs value of NO_x and SO_2, which it removed from the avoided energy costs category and stated separately here in accordance with Commission Order No. 2015-194.

LINE 6: In Order No. 2015-194, the Commission stated that this component of value is set to zero until such time as federal or state laws or regulations yield an avoidable cost for CO_2 emissions. Therefore, the Company has determined that the value of this category is zero because there presently are no such federal or state laws or regulations.

LINE 7: As DESC does not hedge fuels for electric generation, the value for this component is zero.

LINE 8: This component of value was set to $1.80/MWh pursuant to the Commission Directive issued in Docket No. 2021-88-E on November 16, 2021.

LINE 9: Because the administration costs of NEM Distributed Energy Resources are collected through a DER rider added to the fuel clause, the value of this component is zero.

LINE 10: As noted above, environmental costs have been separated from avoided energy costs and set forth here in accordance with the methodology from Commission Order No. 2015-194.

LINE 11: Line 11 is a subtotal of the preceding amounts from lines 1-10.

LINE 12: This category represents the cumulative marginal line losses experienced at a residential customer's meter. In Order No. 2021-569, the Commission directed those utilities who did not yet have marginal line loss data to submit a plan addressing the development of the required data. The Company addresses marginal line losses in their T&D Plan submitted to the Commission on November 17, 2021.

LINE 13: Line 13 is the total value of NEM Distributed Energy Resources.

DESC Witness Rooks sponsored the Company's proposed "Rider to Retail Rates – Second Net Energy Metering for Renewable Energy Facilities" tariff sheet as exhibit AWR-13 to his corrected direct testimony, and DESC's proposed "Rider to Retail Rates – Third Net Energy

Metering for Renewable Energy Facilities" tariff sheet, as exhibit AWR-15 to his direct testimony. (Hearing Ex. 3). These tariff sheets update the total value of NEM Distributed Energy Resource to reflect the components of value for NEM Distributed Energy Resources enumerated by Witness Neely.

ORS Witness Pool testified that the Company updated the value of NEM Distributed Energy Resources, as reflected in Table 2 in Witness Neely's testimony, consistent with applicable statutes, regulations, and prior Commission orders. ORS found the Company's DERP avoided and incremental costs to be reasonably and prudently incurred in implementing the Company's DER program, and that the Company's estimated and forecasted DERP avoided and incremental costs to be reasonable. ORS found the Company's calculation of the proposed DERP Charge and of the under-collected incremental costs complied with Act 236 and the Commission's Orders in previous DERP-related proceedings. (Tr. p. 311:1 – 311:7).

CCL/SACE Witness Beach testified on his examination of the values that DESC calculated for distributed solar resources in this proceeding, as well as his evaluation of whether those values comply with the requirements of S.C. Code Ann. §§ 58-27-865 and 58-40-20, and Commission Order Nos. 2015-194 and 2021-569. Witness Beach recommended a value of $0.1005 per kWh for the current period, and a value of $0.1406 per kWh for the 20-year levelized period, as outlined in Table ES-1 of Witness Beach's prefiled direct testimony and shown below:

	Current Period *($/kWh)*	**20-Year Levelized** *($/kWh)*	**Components**
1	$0.0302	$0.0388	Avoided Energy Costs
2	$0.0322	$0.0322	Avoided Capacity Costs
3	$0.00000	$0.00000	Ancillary Services
4	$0.0257	$0.0297	T & D Capacity
5	$0.0000004	$0.0000002	Avoided Criteria Pollutants
6	$0.0000	$0.0046	Avoided CO_2 Emission Cost

7	$0.0020	$0.0221	Fuel Hedge
8	($0.0009)	($0.0009)	Utility Integration & Interconnection Costs
9	$0.00000	$0.00000	Utility Administration Costs
10	$0.0002	$0.0001	Environmental Costs
11	$0.0112	$0.0141	Avoided Line Losses
12	**$0.1005**	**$0.1406**	**Total Value of NEM DERs**

Witness Beach concluded that DESC significantly undervalued certain values of distributed solar, including the avoided capacity costs for generation, transmission, and distribution. Specifically, Witness Beach disagreed with DESC's methodology for calculating Avoided Energy Costs and recommended different valuations for the Avoided Capacity Costs, T&D Capacity, Avoided CO_2 Emission Cost, Fuel Hedge, Utility Integration & Interconnection Costs, and Avoided Line Losses components of the NEM Value Stack. We address each area of disagreement in turn.

1. <u>Avoided Energy Costs</u>

Witness Neely testified that DESC's avoided energy costs are based on PURPA avoided cost values adjusted to remove the cost of criteria pollutants and environmental costs, which are broken out separately in the NEM Value Stack. (Neely Direct 8–9). Witness Neely testified that DESC updated its avoided energy costs to include a 20-year levelized calculation as required by Order No. 2021-569. (Neely Direct 8–9). Witness Beach asserts that the Company's avoided energy costs should be differentiated on a seasonal and temporal basis, consistent with the approach that the Commission has adopted in Docket No. 2021-88-E concerning revisions to DESC's PR-1 and PR (Standard Offer) avoided cost rate schedules and consistent with the requirements of Order No. 2021-569. (Beach Direct 8, 14). Witness Neely responds that the Company has delayed implementing the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in the

Company's T&D Plan, which the Company submitted to the Commission in accordance with Order No. 2021-569 on November 17, 2021. (Neely Rebuttal 3-4).

Witness Beach does not dispute the Company's calculation of the Avoided Energy Cost component. We therefore conclude that the Company's calculation is reasonable and appropriate based on the evidence contained in the record. We further conclude that DESC's rationale for delaying implementing the temporal and seasonal data for avoided energy costs in order to sync with the temporal and seasonal period for T&D avoided cost as described in the Company's T&D Plan is reasonable and consistent with the requirements of Order No. 2021-569.

2. Avoided Capacity Costs

DESC Witness Neely testified the Company has determined this component of value is zero for the current period because no capacity needs will be present until 2028. Consistent with Order No. 2021-569, the component of value for the 20-year planning horizon is set to $0.00034 per kWh as calculated according to the hourly usage methodology prescribed in Order No. 2021-569. (Neely Direct 9–10). Witness Beach testified that DESC's calculation of avoided capacity cost improperly weighs the capacity contribution of solar equally across all days of the year and gives undue preference to utility-scale solar, in effect assuming it was deployed first. (Beach 16–17). Witness Beach calculated a capacity contribution of 26.5% of nameplate solar capacity based on an average of the gross loads and net loads methodologies. (Beach Direct 15–17). Witness Neely responds that using an average of the value of the first MW with the last MW artificially inflates the current value because the first MW was added to the system years ago. (Neely Rebuttal 4). Witness Neely also notes that the Commission previously rejected Witness Beach's proposed methodology in DESC's prior fuel proceeding as well as in Docket No. 2019-182-E. (Neely Rebuttal 5). In addition, Witness Neely testifies that Witness Beach improperly includes planned replacements of aging combustion turbine ("CT") units in his avoided capacity value calculation because these replacements are not intended to add additional capacity and are not avoidable by solar generation due to their critical and reliability functions that NEM DER solar cannot replace. (Neely Rebuttal 5−6).

The Commission agrees with Witness Neely that it has already considered and rejected Witness Beach's proposed avoided capacity calculation methodology twice. Witness Beach has not presented compelling new evidence or analysis that warrants this Commission changing its methodology or finding the Company did not comply with the established methodology. Witness Neely's avoided capacity calculations are consistent with the requirement of Order No. 2021-569 to estimate the hourly usage profile based on historic usage profiles. In addition, we agree with Witness Neely that the functions of the planned replacement CTs are not replicable currently by NEM DER such that it is appropriate to treat that capacity as "avoidable" for purposes of calculating the avoided capacity values. Accordingly, we agree with the avoided capacity values calculated by the Company.

3. Avoided Transmission & Distribution Costs

The Company determined that its NEM distributed resources will not avoid any transmission or distribution capacity for the current period because there has been no load growth, and, as a result, the value of this category is zero. (Neely Direct 11; Neely Rebuttal 8). The value calculated by the Company for the 20-year planning horizon is $0.001838 per kWh. (Neely Direct 11−12). However, pursuant to Order No. 2021-569, DESC filed its T&D Plan for improving its data capabilities over time to improve the insight into the transmission and distribution systems, and to modernize the planning of transmission and distribution assets to account for the ability of DERs to avoid or defer traditional, utility-owned T&D capital investments. (Neely Direct 12−13).

Witness Beach calculated avoided T&D capacity costs using the costs for T&D capacity costs using the NERA regression method that determines the long-term relationship between DESC's T&D investments and its peak demands. (Beach Direct 8, 21−25). Witness Neely responded that DESC accurately segmented its T&D costs by function and testified that Witness Beach's analysis inappropriately captures costs used for reliability, which are not avoidable, with those that are due to load growth. (Nelly Rebuttal 6−7). Witness Neely also points out that the Company's T&D Plan filed in response to Order No. 2021-569 provides a path for the Company to develop more granular data and analytical sophistication to calculate avoided T&D.

We conclude that the Company's calculations of avoided T&D capacity costs comport with the requirements of Order Nos. 2015-194 and 2021-569. As the Commission found in Order No. 2021-569, "avoided transmission and distribution *may* have a non-zero value" [emphasis added] and greater efforts should be made to quantify a value "using a methodology that accounts for relative availability of and granularity of data about the transmission and distribution system." That Order also acknowledged that flexibility was necessary for electrical utilities to employ a methodology that is reflective of the currently available data. Pursuant to the Order, the Company's T&D Plan was filed in November 2021, and addresses the process by which DESC will arrive at its methodology for assigning transmission and distribution values for the current period in future fuel proceedings.

Furthermore, as we held in Order No. 2021-569, electrical utilities are required to use best efforts and best practices to populate each category of value in the Order No. 2015-194 methodology; however, this Commission declines to take a prescriptive stance on defining the parameters of best practices. The Commission recognizes that best efforts and best practices require a factual determination and will likely differ between and among the electric utilities employing this methodology. Similarly, the determination of whether appropriate justification was provided for a zero value is also a matter of fact. The Company provided testimony that it used best efforts and practices in calculating a zero value for this component and, without evidence to the contrary in the record, the Commission finds that the Company used best efforts to make this determination, and has provided sufficient justification for the zero value in its discussion of data development in its T&D Plan.

As we stated in Order No. 2021-296(A), the Commission rejects Witness Beach's calculation because he does not limit his analysis only to T&D costs involving load growth. The Company's T&D Plan will promote more granular and sophisticated analysis of avoided T&D capacity costs in the near future. The Company's calculations in this proceeding are reasonable and consistent with the Commission's established methodologies.

4. Avoided CO_2 Emission Cost

The Company determined a zero value for CO_2 pollutants. Witness Neely testified that Order No. 2015-194 set the component value for avoided CO_2 at zero until state or federal laws or regulations result in an avoidable cost on utility systems for these emissions and, at present, there are no such state or federal laws or regulations restricting CO_2 pollutant emissions. (Neely Direct, p. 14, ll. 3-7).

Witness Beach provided testimony on the requirements of the Energy Freedom Act in South Carolina, particularly the need for utilities to consider environmental regulations in planning their resource portfolios (Beach Direct, p. 26, ll. 8-10). In turning to the Company's 2021 IRP Update, Witness Beach looks to the mid-range carbon cost scenario included in the Company's update to calculate an avoided carbon benefit of $0.0046 per kWh on a 20-year levelized basis (Beach Direct, p. 27, ll. 8-15).

In rebuttal, Witness Neely stated that Witness Beach's assumptions violated Order Nos. 2015-194 and 2021-569 in the absence of any state or federal laws or regulations restricting the emission of CO_2 pollutants.

We find that a zero value for environmental costs is reasonable and appropriate. As Witnesses Neely and Pool testified, Order No. 2015-194 requires the use of a zero value until such time as federal or state statutory or regulatory requirements impose a cost in this regard. This requirement was not modified by Order No. 2021-569. Witness Beach's analysis and calculations therefore conflict with the carbon costs contemplated by Order No. 2015-194. Consequently, because Witness Beach's analysis does not consider the actual values in effect at the time of this proceeding, his calculation is flawed and must be rejected. The Commission also rejects Witness Beach's recommendation to factor avoided CO_2 emissions into its qualitative analysis.

5. <u>Fuel Hedge</u>

Witness Neely testified that because DESC does not hedge fuels for electric generation, the value of this component was rightfully zero. (Neely Direct, p. 14, ll. 10-11). Witness Beach acknowledges that DESC does not engage in financial hedging in relation to the costs of its fossil fuel purchases, but emphasizes that DESC engages in long-term physical hedging. (Beach Direct, p. 28, ll. 9-11). To calculate his figures for both the current period and the 20-year levelized value, Witness Beach employs a methodology utilized in the Maine Distributed Solar Valuation Study ("Maine Study"); this methodology uses the Henry Hub forecast of natural gas prices using current forward prices for three years before transitioning to Energy Information Administration's 2022 Annual Energy Outlook long-term fundamentals forecast, as well as the current yields from the U.S. Treasury for risk-free investments and a marginal heat rate (Beach Direct, p. 31, ll.8-22).

In rebuttal, Witness Neely responded that fuel diversity is not synonymous with a fuel hedging program. (Neely Rebuttal, p. 9, ll. 9-10). Witness Neely corrected a typographical error in his rebuttal testimony and noted, as the Commission found in Order No. 2021-296(A), "a zero value for hedging is reasonable and appropriate" because the Company does not hedge its fuel costs.

The Commission finds that a zero value for hedging is reasonable and appropriate. The Company does not financially hedge its fuel costs and, therefore, the cost for this category would be zero in accordance with Order Nos. 2021-569 and 2021-296(A). As such, the methodology recommended by Witness Beach used in the Maine Distributed Solar Valuation Study is not appropriate for consideration in this proceeding. Moreover, the Commission finds that the physical fuel hedging is not equivalent to financial fuel hedging. The Commission finds that the fuel hedging component in the NEM Value Stack applies when a utility utilizes financial hedging but not physical hedging.

6. Utility Integration & Interconnection Costs

Witness Neely testified that the component of value for the integration charge is set to $0.0018 per kWh pursuant to the Commission's Directive in Docket No. 2021-88-E. (Neely Direct, p. 14, ll. 15-16). These integration costs are only applied to exported power for customer-sited DER based on Order No. 2021-569. Witness Neely additionally stated that integration costs for DER should focus more on any distribution-system related impacts (Neely Direct, p. 14, ll.17-20 – p. 15, l. 1).

Notably, Witness Beach accepts the $0.0018 per kWh calculated by the Company; however, he suggests that DESC applied this cost component beyond the power exported by solar customers, contrary to Order No. 2021-569 (Beach Direct, p. 32, ll. 4-6).

In rebuttal, Witness Neely testified that for any exported power, the full integrated cost will be applied for power in excess of what is used by the customer, whereas zero integrated cost will be applied for energy used by the customer. (Neely Rebuttal, p. 9, ll. 16-18). As such, the cost of integrating DER should not be reduced. The Commission agrees with the value assigned to this component by the Company, as it comports with the Directive issued in Docket No. 2021-88-E on November 16, 2021.

7. Avoided Line Losses

Order No. 2021-569 modified the existing methodology for calculating line losses by requiring electrical utilities to determine marginal line losses associated with customer-generator facilities; should that data not exist for an electrical utility, the Commission directed that the utility develop a plan to acquire such capability.

Witness Neely testified that DESC planned to continue utilizing its current approach for deriving losses for its distribution system and apply that approach to representative circuit types. Witness Neely testified that the Company will calculate losses by load level and time of day via loss curves for representative feeders. DESC will also apply its current approach to determine transmission losses using a two-phase approach: first, DESC will utilize its Energy Management System to capture transmission network losses under certain load and generation dispatch conditions; once the first phase is completed, the second phase will assess the feasibility of deriving marginal losses on a seasonal or time of day basis. (Neely Direct 17:16−18:3).

Witness Beach acknowledges that the Company addressed calculations of marginal line losses in its submitted T&D Plan consistent with Order No. 2021-569, but recommends several changes to the Company’s calculation, including assuming that both marginal transmission and distribution losses are 50% higher than average, applying energy losses to the energy or fuel-related avoided cost components, and applying both transmission and distribution capacity losses to avoided generation and transmission capacity costs but apply only avoided distribution capacity losses to avoided distribution capacity costs. Witness Neely explained in rebuttal that the T&D Plan will determine actual marginal line losses, and that due to DESC's network configuration, transmission line losses are approximately equal to average losses.

The Commission finds that the Company's calculations of line losses are reasonable and appropriate. Notably, the Company does not assign a zero value, and no evidence was put in the record to suggest that the Company is not using best practices in its calculations of this component. Witness Beach himself acknowledges that the Company has "developed a detailed study plan" to determine the marginal line losses associated with customer-generator facilities, which was required by this Commission in Order No. 2021-569. The Commission rejects Witness Beach's recommended changes to the Company's calculation of avoided line losses.

The Commission finds that the Company's recommendations for the value of NEM Distributed Energy Resources are reasonable and appropriate for the reasons set forth above.

C. Base Fuel Cost

Allen Rooks, DESC Manager of Regulation, testified on the Company's currently approved electrical fuel cost factors, as well as DESC's base fuel cost for both the Review and Forecast Periods. Witness Rooks' Exhibit AWR-1 provided a summary of the Company's actual and projected base fuel component costs. This exhibit shows the actual base fuel under-collected balance to be $115,854,473 at December 31, 2021, and the projected under-collected balance to be $74,309,944 at the end of April 2022, which reflects the application of adjustments that the Company is proposing in this proceeding. (Rooks Corrected Direct 4:17−5:3; Hearing Ex. 3). AWR-1 also shows the Company's Base Fuel Component forecast and projected recovery calculations by month for the period May 2022 through April 2023. (Rooks Corrected Direct 5:4−6; Hearing Ex. 3). Witness Rooks testified that a Base Fuel Component of 3.032 cents per kWh is projected to recover all base fuel costs in the Forecast Period in addition to recovering the projected under-collected balance by the end of April 2023. (Rooks Corrected Direct 5:9−10; Hearing Ex. 3).

Witness Rooks also explained that the Company proposed to reduce the under-recovered fuel balance by applying the proceeds of two settlement agreements to immediately flow the benefits to customers. Witness Rooks explained that the Company received funds from the monetization of a settlement agreement with Toshiba Corporation ("Toshiba"); those funds were recorded as a regulatory liability on the Company's books to resolve mechanics liens associated with V.C. Summer Units 2&3, as detailed in Order No. 2018-804. Witness Rooks testified that all liens have now been resolved, and the Company proposed to apply the remaining Toshiba Settlement proceeds of $61,349,195 as a reduction to its under-collected base fuel costs balance to provide an immediate benefit to customers. Witness Rooks also testified that the Company proposed to apply proceeds that DESC received related to its claims from the resolution of the Westinghouse Electric Company LLC's ("WEC") bankruptcy proceeding. The Company had recorded these proceeds as a regulatory liability with a projected balance of $4,581,739 as of April 30, 2022. The total reduction amount of $65,930,934 from the Toshiba settlement and WEC bankruptcy proceeds is included in the "Fixed Capacity Charges and Adjustments" line represented on row 29 of AWR-1, page 1 in the month of April 2022. (Rooks Corrected Direct 8:4−6; Hearing Ex. 3). Application of these settlement proceeds translates to a $3.00 reduction per month in DESC's current 1,000 kWh residential bill. (Rooks Corrected Direct 8:13−14).

He further testified that the Company is proposing that Variable Environmental & Avoided Capacity Cost Components be increased for all classes of customers for the period May 2022-April 2023; that DER Avoided Cost components be slightly decreased for Residential, Small, and Large General Service customer classes, and slightly increased for the Medium General Service customer class. (Tr. p. 24.15, ll. 9-13).

Witness Rooks testified that the Company's proposed Total Fuel Cost factors per kWh, as shown in Exhibit AWR-10, are as follows:

Class	Base Fuel Cost Component (cents/kWh)	Variable Environmental & Avoided Capacity Cost Component (cents/kWh)	DER Avoided Cost Component (cents/kWh)	Total Fuel Cost Factor (cents/kWh)
Residential	**3.032**	**0.101**	**0.040**	**3.173**
Small General Svc.	**3.032**	**0.084**	**0.032**	**3.148**
Medium General Svc.	**3.032**	**0.074**	**0.030**	**3.136**
Large General Svc.	**3.032**	**0.044**	**0.017**	**3.093**
Lighting	**3.032**	**--**	**--**	**3.032**

In addition to the per kWh factors shown above, the Company is also proposing to increase its DER Incremental Cost Component (FIC) per account per month to $6.82 for Small/Medium General Service customers. The per account per month fee of $1.00 for Residential and $100.00 for Large General Service customers will remain unchanged to comply with the DERP Act caps. (Rooks Direct 16:1–5). The impact of the Company's proposed total fuel cost factor on a 1,000 kWh monthly residential electric customer bill is an increase of $6.53, or 5.19%, inclusive of revenue tax. ORS Witness Briseno testified that based on ORS's examination, ORS agrees with the balances as calculated in Company Witness Rooks' Exhibits in this docket. Witness Briseno testified that "it is ORS's opinion, that subject to the Company's Adjustments, the Company's accounting practices are in compliance with S.C. Code Ann. §§ 58-27-865, 58-39-130, 58-39-140, 58-40-20, and prior Commission Orders." Witness Briseno described the scope of ORS's examination and verification of the monthly calculations and the (over)/under-recovery balances recorded in the Company's books and records for base fuel costs, environmental and avoided capacity costs, Distributed Energy Resource Program ("DERP") incremental costs, and DERP avoided costs for the Actual Period. (Briseno Direct 3:4−7). ORS verified these monthly calculations and (over)/under-recovery balances to the Company's monthly fuel reports filed under Docket No. 2006-192-E and the Company's testimonies and exhibits filed in this docket. (Briseno Direct 3:7−10). Witness Briseno stated that ORS analyzed the fuel stock accounts, sampled receipts to the fuel stock accounts, verified fossil and nuclear fuel expenses, verified purchased power and sales, verified kWh sales, recalculated and verified the (over)/under-recovery of (i) base fuel, (ii) environmental and avoided capacity, and (iii) DERP incremental and avoided costs, and reviewed and recalculated all Company adjustments for the actual period. (Briseno Direct 3−8). The results of ORS's audit review are provided in Witness Briseno's exhibits ADB-1 through ADB-8. (Hearing Ex. 6).

Witness Briseno testified that ORS agrees with the following cumulative (over)/under-recovery balances as calculated by the Company:

- December 2021 base fuel costs under-recovery of $115,854,473;
- December 2021 environmental and avoided capacity costs over-recovery balance of $381,483;
- December 2021 DERP incremental costs under-recovery balance of $8,193,729;
- December 2021 DERP avoided costs over-recovery balance of $1,206,003;
- April 2022 estimated base fuel costs under-recovery of $74,309,944;

- April 2022 estimated environmental and avoided capacity costs over-recovery balance of $342,548;
- April 2022 estimated DERP incremental costs under-recovery of $9,598,889;
- April 2022 estimated DERP avoided costs over-recovery balance of $769,807.[8]

Witness Seaman-Huynh testified that ORS determined the primary drivers of the Company's request for a fuel rate change were the projected fuel cost under-recovery as of April 2022 and forecasted increasing commodity prices. Witness Seaman-Huynh also testified that the ORS supported the Company's proposal to use the proceeds from the Toshiba and Westinghouse settlements to offset the fuel cost increase. (Seaman-Huynh Direct 5−6). Based on ORS's review, Witness Seaman-Huynh testified that ORS does not recommend any adjustments to the Fuel Factors proposed by the Company. (Seaman-Huynh 7:7−8).

Witness Seaman-Huynh recommended that DESC provide a forecast to all interested parties of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and other fuel required for the generation of electricity. Additionally, the forecast would provide the expected DERP Charge to be set at the Company's next annual fuel proceeding based upon DESC's historical (over)/under-recovery to date and DESC's forecast of DERP incremental and avoided costs. ORS recommends these forecasts be provided on a quarterly basis after the Company's new fuel rates are effective for the quarters ending June 30 and September 30, 2022.

SACE and CCL did not present testimony regarding DESC's proposed base fuel component. As reflected in the evidence of record, no party challenged DESC's proposed Base Fuel Component.

[8] This figure was calculated by ORS and the Company agreed with it in Witness Rooks' direct testimony exhibits.

Based upon the evidence and the testimony of the witnesses, the Commission finds the proposed fuel rates would increase residential bills of the typical consumer using 1,000 kWh by $6.53, or 5.19%, compared to current rates; further, the Commission finds DESC's Base Fuel Component is just and reasonable and consistent with S.C. Code Ann. § 58-27-865.

D. Distributed Energy Resources

Mark Furtick, DESC's Advisor for Renewable Energy Programs, testified to the performance and costs associated with the Company's DER programs during the Review Period and provided the DER program cost projections for the forecast period of January 1, 2022, through April 30, 2023. Witness Furtick testified that the cumulative balance of DESC's DER program costs as of December 31, 2021, total an over-collected balance of $1,206,003 in avoided costs and an under-collected balance of $8,193,729 in incremental costs. Witness Furtick also testified for the Forecast Period the Company projects the DERP Costs will include $9,872,994 in avoided costs and $28,580,103 in incremental costs.

As to utility-scale DER programs, Witness Furtick testified "DESC has achieved the 1% goal . . . set forth in Act 236." (Tr. p. 138.10, l. 15). Witness Furtick also testified as to DESC's actions towards meeting its customer-scale DER programs, and relayed DESC met its 1% customer-scale goal. (Id.).

DESC Witness Rooks also testified as to DESC's DER avoided and incremental costs in the Review and Forecast Periods. (Tr. p. 254.15, ll. 9 –13). Witness Rooks noted the proposed DER avoided costs component would result in a "slight decrease for the Residential, Small, and Large General Service customer classes, and a slight increase for the Medium General Service customer class." (*Id.*). Witness Rooks testified that, as shown in Composite Hearing Exhibit No. 5 (AWR-7), the Company is recommending the following DER Avoided Cost components for the period May 2022 through April 2023: 0.40 cents per kWh for the Residential rate class; 0.32 cents per kWh for the Small General Service rate class; 0.30 cents per kWh for the Medium General Service rate class; and 0.17 cents per kWh for the Large General Service rate class. (Hearing Exhibit No. 3 (AWR-6)). Witness Rooks testified that, as reflected in Composite Hearing Exhibit No. 6 (AWR-9), the Company's DER program Incremental Costs by class should be: $1.00 per account per month for the Residential rate class; $6.82 per account per month for the Small/Medium General Service rate class; and $100.00 per account per month for the Large General Service rate class.

As noted above, Witness Rooks sponsored the Company's proposed "Adjustment for Fuel, Variable Environmental & Avoided Capacity, and Distributed Energy Resource Costs" tariff, as reflected in Composite Hearing Exhibit No. 6 (AWR-11). Witness Furtick further testified that based upon his experience and opinion, the Company has achieved the utility-scale and customer-scale goals as prescribed by S.C. Code Ann. § 58-39-130 (2015). As of December 31, 2017, DESC has nine solar farms totaling 48.16 MW interconnected to DESC's distribution system as part of the Company's approved DER program. (Tr. p. 138.5, l. 19). DESC also has 12,234 customers participating in its customer-scale DER programs as of December 31, 2021, providing approximately 100.98 MW of solar generating capacity on the Company's system. (Tr. p. 138.7, ll. 17-21 – 138.8, ll. 1-4).

ORS Witness Pool testified that the Company's DER program calculations comply with Act No. 236 of 2014 and Commission Orders, and that the Company's calculations support DESC's proposed DER program charges. (Tr. p. 311:3 – 311:7).

SCCCL and SACE did not present testimony regarding DESC's DER programs during the Review Period.

The Commission finds the evidence presented indicates DESC offered DER programs and met its statutorily designated goals as set by Section 58-39-130. The Commission further finds DESC's DER programs, and the associated costs, are just and reasonable.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

Having heard the testimony of the witnesses and representations of counsel and after careful review of the evidentiary record, the Commission makes the following findings of fact, as well as any findings of fact as stated above:

1. DESC's fuel purchasing practices and policies, power plant operations, and fuel inventory management were reasonable and prudent for the Review Period pursuant to S.C. Code Ann. § 58-27-865 of the South Carolina Code of Laws.

2. DESC's proposed monthly rates and charges are consistent with the standards for fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865; such proposed rates and charges are calculated to allow recovery in a precise and prompt manner while assuring public confidence. As such approval of these rates and charges is in the public interest in this case. Additionally, the proposed monthly rates and charges provide stabilization to the fuel factors, minimize fluctuations for the near future, and do not appear to inhibit economic development in South Carolina.

3. DESC met the utility-scale and customer-scale goals of S.C. Code Ann. § 58-39-130 of the South Carolina Code of Laws, and reasonably and prudently incurred costs to implement its DER program, as approved in Commission Order No. 2015-512.

4. The updated components of value for NEM Distributed Energy Resources as shown in Table 2 on Page 8 of the direct testimony of DESC Witness Neely (Tr. p. 145.8) and as set forth above on page 14 of this Order are reasonable and prudent, comply with the NEM methodology

approved by the Commission in Order No. 2015-194, as modified by Order No. 2021-569, and satisfy the requirements of S.C. Code Ann. §§ 58-40-10 to –20 (2015, Supp. 2020).

5. DESC offered DER programs and took steps to fulfill its DER goals approved by the Commission in Order No. 2015-194, which programs and steps were just and reasonable, complied with Order Nos. 2015-194 and 2015-512, and were designed to meet DESC's statutorily designated goals as set by S.C. Code Ann. § 58-39-130 (2015).

6. As a result of DESC's efforts to provide the DER programs, the over-collected balance of the DER program costs as of December 31, 2021, totaled $1,206,003 in avoided costs and an under-collected balance of $8,193,729 in incremental costs, and such costs are reasonable and prudent.

7. DESC's proposed DER Avoided Cost Components by class are reasonable and prudent. DESC's proposed monthly per account DER Incremental Cost Components by class properly allocate DESC's DER program incremental costs and are reasonable and prudent.

8. DESC's proposed "Adjustment for Fuel, Variable Environmental, Avoided Capacity, and Distributed Energy Resource Costs" tariff sheet, including the rates, terms, and conditions, is lawful, just, and reasonable.

9. The Commission finds that the fuel factors as calculated in Company Witness Rooks' Exhibit AWR-1 are lawful, just, and reasonable.

10. DESC's proposed revisions to its "Rider to Retail Rates — Second Net Energy Metering for Renewable Energy Facilities" and "Rider to Retail Rates — Third Net Energy Metering for Renewable Energy Facilities" tariff sheets are just and reasonable.

11. DESC's proposed monthly per kWh DER Avoided Cost Components by class are just and reasonable.

12. DESC's proposed monthly per account DER Incremental Cost Components by class are just and reasonable.

V. ORDERING CLAUSES

IT IS THEREFORE ORDERED THAT:

1. The fuel purchasing practices and policies, power plant operations, fuel inventory management, and all other matters associated with S.C. Code Ann. 58-27-865 (2015) of DESC are reasonable and prudent for the period January 1, 2021, through December 31, 2021.

2. With regard to plant outages that are not complete as of the end of the Review Period, or plant outages where final reports or investigations (whether conducted by the Company, contractor, government entities or otherwise) were not available at the time of the hearing on this matter, the reasonableness of such outages shall be subject to review by the ORS in the subsequent review period where such plant outages are complete and/or when such report(s) become available.

3. The methodologies used by the Company for determining the environmental cost component and the capacity-related cost component of the fuel factor are consistent with the requirements of S.C. Code Ann. § 58-27-865 and are reasonable and prudent for the review period and the billing period.

4. The methodologies used by the Company to calculate its avoided energy and capacity costs under PURPA for the Review Period and Billing Period are reasonable and prudent.

5. The Company's revisions to the Renewable Net Metering Rider RNM tariff sheet, attached hereto as **Order Exhibit 1**, are lawful, just and reasonable, and shall become effective for service rendered during the Billing Period.

6. The updated components of value for NEM Distributed Energy Resources listed in the table below comply with the NEM methodology approved by the Commission in Order No.

2015-194, Order No. 2021-569, and properly evaluate and/or quantify all categories of potential costs or benefits to DESC's system, and satisfy the requirements of S.C. Code Ann. §§ 58-40-10 to -20 of the South Carolina Code (2015).

	Current Period ($/kWh)	**20-Year Levelized ($/kWh)**	**Components**
1	$0.03024	$0.03878	Avoided Energy Costs
2	$0.00000	$0.00034	Avoided Capacity Costs
3	$0.00000	$0.00000	Ancillary Services
4	$0.00000	$0.001838	T & D Capacity
5	$0.0000004	$0.0000002	Avoided Criteria Pollutants
6	$0.00000	$0.00000	Avoided CO_2 Emission Cost
7	$0.00000	$0.00000	Fuel Hedge
8	($0.00180)	($0.00180)	Utility Integration & Interconnection Costs
9	$0.00000	$0.00000	Utility Administration Costs
10	$0.00015	$0.00011	Environmental Costs
11	$0.02860	$0.03928	Subtotal
12	$0.00234	$0.003208	Line Losses @ 0.9245
13	$0.03093	$0.04248	**Total Value of NEM Distributed Energy Resources**

7. The tariff sheets entitled "Rider to Retail Rates-Second Net Energy Metering for Renewable Energy Facilities" and "Rider to Retail Rates-Third Net Energy Metering for Renewable Energy Facilities" are approved for use by DESC on, during, and after its first billing cycle in May, 2022.

8. DESC's DER programs offered during the Review Period were reasonable and prudent, complied with Commission Order Nos. 2015-194, 2021-569, and 2015-512, and were

designed to meet DESC's statutorily designated goals as set by S.C. Code Ann. $ 58-39- 130 (2015).

9. The monthly DER Avoided Cost Components by class are approved for DESC bills rendered on, during, and after its first billing cycle in May 2022.

10. DESC's proposed monthly per account DER Incremental Cost Components by class as set forth below, are approved for DESC bills rendered on, during, and after its first billing cycle in May 2022.

Customer Class	DERP Incremental Cost Component (per Account per Month)
Residential	**$1.00**
Small & Medium General Service	**$6.82**
Large General Service	**$100.00**

11. DESC shall establish its Base Fuel Cost Component, Variable Environmental & Avoided Capacity Cost Components and Total Fuel Cost Factors as set forth below, and these amounts shall be effective for use in DESC bills rendered on and after the first billing cycle of May 2022.

Class	Base Fuel Cost Component (cents/kWh)	Variable Environmental & Avoided Capacity Cost Component (cents/kWh)	DER Avoided Cost Component (cents/kWh)	Total Fuel Cost Factor (cents/kWh)
Residential	**3.032**	**0.101**	**0.040**	**3.173**
Small General Svc.	**3.032**	**0.084**	**0.032**	**3.148**
Medium General Svc.	**3.032**	**0.074**	**0.030**	**3.136**
Large General Svc.	**3.032**	**0.044**	**0.017**	**3.093**
Lighting	**3.032**	**--**	**--**	**3.032**

12. DESC shall file with the Commission the tariff sheets and rate schedules approved by this Order, and all other retail tariff sheets, within ten (10) days of receipt of this Order and shall serve copies on all Parties. The fuel rates reflected in each tariff sheet shall be consistent with the components and factors set forth in this Order. DESC shall electronically file the revised tariffs in a text-searchable PDF format using the Commission's DMS System (https:/dms.psc.sc.gov). DESC shall also file an additional copy via e-mail to etariff@psc.sc.gov to be included in the Commission's Electronic Tariff system (https://etariff.psc.sc.gov). DESC shall provide a reconciliation of each tariff rate change approved in this Order to each tariff rate revision filed in the Electronic Tariff system. Such reconciliation shall include an explanation of any differences and DESC shall submit this information separately from DESC's Electronic Tariff filing. DESC shall reference this Order and its effective date at the bottom of each page of each tariff sheet.

13. DESC shall comply with the notice requirements set forth in S.C. Code Ann. § 58-27- 865(B) (2015).

14. DESC shall continue to file its monthly reports as previously required.

15. DESC shall account monthly to the Commission and to ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to revenues with a corresponding deferred debit or credit. ORS shall monitor the cumulative recovery amount.

16. The Company shall provide a forecast to ORS, and upon request to any intervening party to this docket, of the expected fuel factor to be set at its next annual fuel proceeding based upon its historical (over)/under recovery to date and forecasts of prices for uranium, natural gas, coal, oil and other fuel required for the generation of electricity. Additionally, the forecast would provide the expected DERP Charge to be set at the Company's next annual fuel proceeding based

upon DESC's historical (over)/under-recovery to date and DESC's forecast of DERP incremental and avoided costs. These forecasts shall be provided on a quarterly basis after the Company's new fuel rates are effective for the quarters ending June 30 and September 30, 2022.

17. The Company shall, by rate class, account monthly to the Commission and ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to unbilled revenues with a corresponding deferred debit or credit.

18. The Company shall submit monthly reports to the Commission and ORS of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts or greater.

19. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

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Justin T. Williams, Chairman

ATTEST:

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Florence P. Belser, Vice-Chairman

(SEAL)